

TWO NEW LAND SHELLS FROM THE WESTERN STATES.

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While accompanying her husband, the Secretary of the Smithsonian Institution, on a collecting trip through the Northwest, Mrs. Walcott gathered some specimens of *Oreohelix* in Montana. These belong to an undescribed race which I take pleasure in naming for the discoverer.

The second subspecies, *Oreohelix idahoensis baileyi*, here described was collected by Mr. Vernon Bailey of the Biological Survey, in 1896, on a limestone ridge, at an altitude of 700 feet, in the Seven Devils Mountains of Idaho.

OREOHELIX YAVAPAI MARIAE, new subspecies.

Plate 31, figs. 1-3.

Shell decidedly depressed helicoid, almost lenticular, flesh colored, with a narrow brown band on the upper surface, which is a little nearer the peripheral cord than the suture, and a second even narrower one bordering the peripheral cord on the lower surface. Nuclear whorls scarcely differentiated from the succeeding turns, bearing the same sculpture as the adult whorls, but a little less strongly expressed. Periphery of the whorls provided with a cord-like keel, which becomes somewhat weakened on the last quarter of the last turn. Entire surface both above and below marked by slender thread-like incremental lines and fine spiral striations; last whorl slightly descending near the aperture. Base broadly, openly umbilicated, well rounded; a little more convex at the umbilical wall than at the lateral margin. Aperture very oblique, oval; peristome neither thickened nor reflected at the edge; parietal wall strong, rendering the peristome complete.

The type and eight specimens of this subspecies (Cat. No. 215132, U.S.N.M.), were collected by Mrs. Mary Walcott on Squaw Creek near the mouth of Gallatin Canyon, Montana. The type has 5.6

whorls and measures: Altitude, 10.0 mm.; greatest diameter, 22.5 mm.; least diameter, 19.6 mm.

The other specimens yield the following additional measurements

Number of whorls.		Altitude.	Greatest diameter.	Least diameter.
Type	5.6	10.0	22.5	19.6
	5.4	9.3	21.2	18.0
	5.5	9.1	21.1	18.4
	5.3	9.0	20.0	17.3
	5.6	10.0	22.4	18.7
	5.6	8.6	20.5	18.0
	5.6	9.1	20.7	18.5
	5.2	8.2	18.3	15.6
	5.4	9.9	19.5	17.3
Largest	5.6	10.0	22.5	19.6
Least	5.2	8.2	18.3	15.6
Average	5.47	9.24	20.69	17.93

This race of *Oreohelix yavapai* Pilsbry is the most northern one so far reported. It differs from the typical form, which comes from "Purtyman's Ranch on Oak Creek, Yavapai County, about 40 miles from Jerome, Arizona," in being larger, more solid and more acutely keeled. Dr. Henry A. Pilsbry gives the following measurements of his *O. yavapai*: Altitude 8.7-9.5 mm.; greatest diameter 15.2-16.6.

Our race appears nearest related to *Oreohelix yavapai angelica* Pilsbry and Ferriss, which was collected by these authors near the base of the Crossbed Sandstone, Bright Angel Trail, Grand Canyon, Colorado. Of this Doctor Pilsbry has kindly sent me eight specimens for the collection of the United States National Museum (Cat. No. 215085), which yield the following measurements:

Number of whorls.		Altitude.	Greatest diameter.	Least diameter.
Type	4.6	8.0	18.0	15.2
	4.7	7.6	17.4	15.0
	5.0	7.3	17.0	14.6
	4.9	8.0	17.3	14.1
	4.9	8.0	16.9	14.6
	4.8	8.0	17.5	14.5
	4.8	8.0	17.6	14.6
	5.0	8.3	16.4	14.0
Largest	5.0	8.3	18.0	15.2
Least	4.6	7.3	16.4	14.0
Average	4.83	7.9	17.26	14.57

In addition to the differences expressed by the measurements, our shell has the peripheral keel even more compressed than *Oreohelix yavapai angelica* Pilsbry and Ferriss.

OREOHELIX IDAHOENSIS BAILEYI, new subspecies.

Plate 31, figs. 4-6.

Shell depressed, helicoid. Nuclear whorls $2\frac{1}{2}$, marked by somewhat irregularly disposed, crude, axial ridges, and fine spiral striations. The postnuclear whorls are well rounded, marked by very coarse, broad and strong, decidedly retractively slanting axial ribs, of which 23 occur upon the last whorl of the type. These ribs and the spaces between them are crossed by strong incremental lines. In addition to the axial sculpture the whorls are marked by fine closely spaced spiral striations which are best developed in the intercostal spaces of the last whorl. Periphery of the last whorl with a slender keel. Base broadly openly umbilicated, marked by the continuations of the axial ribs which extend well within the umbilicus, and spiral sculpture like the upper surface. Aperture oblique, subcircular, peristome not reflected.

The type and two additional specimens (Cat. No. 133221, U.S.N.M.) were collected on a limestone ridge on the side of a rapid creek, at an altitude of 3,700 feet, in the Seven Devils Mountains, Idaho, by Mr. Vernon Bailey of the United States Biological Survey. This shell is at once distinguished from *Oreohelix idahoensis idahoensis* Newcomb by its much smaller size, more depressed form, decidedly open, funnel shaped umbilicus, and the presence of a slender peripheral keel.